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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/595,935	06/16/2000	Rudolf Maarten Bolle	YOR9-2000-0382US1	2281

7590 05/13/2004  
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EXAMINER

BAYAT, ALI

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 05/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/595,935

Applicant(s)

BOLLE ET AL.

Examiner

Ali Bayat

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on amendment filed on 8/13/03.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 15-24 is/are rejected.
- 7) ☒ Claim(s) 12-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 2625

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments, (pages 7-8) filed on 2/19/04, with respect to claims 1 and 22-24 under Piosenka et al. (U.S. patent 4,993,068) and Blonder (U.S. patent 4,414,684) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Hsu et al. (U.S. patent 6,134,340).

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 is not clear to the Examiner, because claim 9 refers to first digital representation, which quantized at particular level, further claim 10 depends to claim 9, where the distorted digital representation has a larger range relative to the range of the first digital representation. It seems that Applicant comparing the first digital representation of claim 9 with the first digital representation in claim 10, which is not clear to the examiner.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2625

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3,5,7,20,11,15-16,19 and 22-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Hsu et al. (U.S. 6,134,340).

In regard to claim 1 Hsu provides for a computer system comprising one or more central processing units (Fig.1 elements 12 and 14) and one or more memories (Fig.1 element 16), the system further comprising: one or more sensors (Fig.1 element 10) that sense one or more characteristics of a user (Fig.1 elements 10) and converts the characteristics into a first digital representation (Fig.1 element 12, note the binary image from the image preprocessor 12 is transmitted to reference patch determination processor element 14 of Fig.1) that is stored in one or more of the memories (Fig.1 element 16), the first digital representation having one or more subcharacteristics ( col.6 lines 62-67, note references patches which corresponds to ridges and valleys in fingerprint image), the subcharacteristics being invariant over time, insensitive to common sensing artifacts, and capable of being repeatably extracted (col. 6 lines 62-67, note fingerprints ); a distorted digital representation by distorting at least one of the subcharacteristics, the distortion process being repeatable and non-invertible ( Fig.1 element 12, note the binary image ( fingerprint) from the image preprocessor 12 is transmitted to the correlator processor 18 ); and a comparison process that compares one or more sets of the distorted subcharacteristics to one or more stored sets of

Art Unit: 2625

distorted subcharacteristics to determine the identity of the user ( Fig.1 element 18, note that binary images from the processor 12 and storage 16 are compared at processor 18, col.7 lines 6-15).

With regard to claims 2 and 3. See claim 1 above. They recite similar limitation as claim 1. Hence they are similarly analyzed and rejected.

With regard to claim 5 Hsu provides for a system, where the distortion is applied to a orthogonal Cartesian grid partitioning of the first digital representation (Fig.19 which provides for digital representation of binary image).

With regard to claims 7 and 20 Hsu provides for a system, where the distortion process is a geometric distortion of the first digital representation (col.3 lines 33-43).

With regard to claim 11, Hsu provides for a system, where the distortion process is applied within a canonical reference frame associated with the first digital representation (clo.18 lines 1-15).

With regard to claims 15 and 16. see claim 1 above. They recite similar limitation as claim 1. Hence they are similarly analyzed and rejected.

With regard to claim 19. See claim 1 above. It recites similar limitations as claim 19. Hence it is similarly analyzed and rejected.

In regard to claims 22-24 see claim 1 above. They recite similar limitations as claim 1 above. Hence they are similarly analyzed and rejected.

*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2625

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8, 17-18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hus (U.S. 6,134,340) in view of Prokoski (U.S. 5,982,932).

In regard to claims 8, 17-18 and 21 Hus discloses for a characteristics of a user (Fig.1 elements 10), Hus does not disclose expressly for a block scrambling of first digital representation and second digital representation distorted by a new distorted process. Prokoski discloses the above limitations (col.9 lines 35-47, note scrambling, and col. 31 lines 44-54, note voice prints and facial features) however the system and method of Hus and Prokoski are combinable because they are in the same field of endeavor. At time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the system and method of prokoski with system and method of Hus, because the invention of Prokoski relates to a method and apparatus for comparing two or more patterns to determine whether they are the same or essentially the same (col.1 lines 24-26).

With regard to claim 18. See claim 17 above. It recites similar limitations as claim 18. Hence it is similarly analyzed and rejected.

5. Claims 6 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hus (U.S. 6,134,340) in view of Thomas et al. (U.S. 4,103,847).

As to claim 6 and 9, Hus discloses for a characteristics of a user (Fig.1 elements 10), Hus does not disclose expressly for a circular polar- coordinated grid partitioning of the first digital representation and quantization of first digital representation. Thomas

Art Unit: 2625

discloses the above limitations (col.5 lines 64-67, note circular, or polar scan formats, and col.7 lines 50-55, note quantizer). However the system and method of Hus and Thomas are combinable because they are in the same field of endeavor. At time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the system and method of Thomas with system and method of Hus, because the invention of Thomas relates to techniques for obtaining electronic area signatures compatible with circular, polar or Cartesian coordinate imaging systems (col.1 lines 44-46).

With regard to claim 10 as best understood. See claim 9 above. It recites similar limitation as claim 10. Hence it is similarly analyzed and rejected.

*Allowable Subject Matter*

6. Claims 12-14 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Cited References*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. patent 5,067,162 to Driscoll, Jr. et al. is cited for method and apparatus for verifying identity using image correlation.

U.S. patent 4,896,363 to Taylor et al. is cited for apparatus and method for matching image characteristics such as fingerprint minutiae.

Art Unit: 2625

U.S. patent 5,982,914 to Lee et al. is cited for identification of individuals from association of finger pores and macrofeatures.


Contact Information

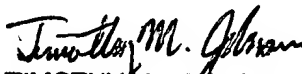
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Bayat whose telephone number is 703-306-5915.

The examiner can normally be reached on M-Thur 9:00-7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 703-3085246. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5631.

Ali Bayat   
Patent examiner  
Group Art Unit 2625  
5/12/04

  
TIMOTHY M. JOHNSON  
PRIMARY EXAMINER